

REMARKS

The present remarks are submitted in response to the Office Action of December 18, 2003. In view thereof, favorable reconsideration of the subject application is earnestly solicited.

Claims 1 - 8 are currently pending. In the Office Action, the Examiner rejects claims 1 and 2, and also rejects new claims 3-8, over newly cited prior art. In view of the lack of general relevance of the newly cited art, however, applicants believe that this rejection should be withdrawn at this time.

Claims 1, 2 and 5-8 have been rejected under §103 as being obvious over the combination of the admitted prior art (APA), taken in view of newly cited Teshima (USP 5,658,660). The Examiner cites the Teshima reference particularly for a teaching of an electrical insulator which prevents sulfur permeation. Applicants do not believe that the reference is particularly relevant.

Teshima relates to a coating technique for the magnetic cores of, e.g., hard disk drives. As explained by Teshima, it had been known in the art for some time that hard disk drive surfaces sometimes suffer from a phenomenon known as "clouding" which had been known to cause errors in read-write operations. Teshima was apparently the first to discover that this problem was due to the condensation of gasified tin compounds originating from the coating composition used on the disk drive motor core. Accordingly, the object of Teshima was to replace the conventional tin-containing coating with a replacement compound which did not contain tin. The compounds used by Teshima include cationic electrode deposition coatings

composed of, e.g., epoxy or acrylic resin. See, for example, col. 2, lines 36-61, where the coatings are further stated as including polyglycidyl ethers of polyphenol.

In light of the above disclosures, the Examiner has rejected claim 1, which does not specify the insulating layer material, claim 5, which specifies a thermosetting epoxy resin, and claim 7, which specifies a phenol resin.

Applicants submit that the disclosure of Teshima is so far removed from the present application that it represents non-analogous art, and is irrelevant in any event.

First of all, Teshima does not address an insulative coating to be used on a conducting wire, and is not relevant to the automotive environment. The coatings disclosed in Teshima are used for a disk drive motor core, and although the patent discusses the windings to be placed upon the core, there is no discussion whatever of coating the conductive windings themselves. Secondly, one of skill in the art who had discovered a problem with sulfur infiltration would hardly be expected to consult the art of disk drive motors, which of course do not operate in sulfur or organo-sulfur compound-containing environments. Finally, to the extent relevant, Teshima is dealing with a particular gasification problem with coating compounds containing tin, and accordingly this work would not be considered as relevant to permeation problems in general, or by sulfur compounds in particular.

Based on the foregoing, Applicants believe that the Teshima disclosure is largely irrelevant, and is relied upon by the Examiner here through classic hindsight. There is absolutely nothing in either the APA or Teshima which would compel or suggest their combination.

Claims 3 and 4 have been rejected over the combination of the APA, Teshima and another newly cited patent to Irwin (USP 5,710,475). Applicant's comments regarding the Irwin reference are rather similar to those made with regard to Teshima.

The Irwin patent at least relates to insulating coatings which are used for metallic conductors. However, in this case, the metallic conductors are not simple conducting wires, but are rather the large stator bars found in turbine generators, which are subjected to intensive heat and electromagnetic fields. The coating composition may include polyimides, however, the novel point of the Irwin disclosure resides in the addition of inorganic compounds such as boron nitride to the coating, in order to obtain a desired thermal conductivity.

Again, this reference does not relate at all to the automotive environment, nor to insulating coatings which are useful in an oil-based, sulfur containing environment. Similarly, Irwin does not mention the characteristic of sulfur permeation inhibition as a relevant factor, which is understandable given that these stator bars of turbine generators do not operate in such an environment.

Again, Applicants therefore conclude that Irwin represents non-analogous art, or, at best, art of little relevancy which has been chosen through the use of hindsight.

As mentioned in Applicant's previous response, patentability may flow from the discovery of the particular source of a problem, even when the solution to that problem, once understood, is obvious. The prior art references chosen by the Examiner do not recognize the cause of the problem.

Moreover, Applicants submit that the Examiner has not provided a suggestion or motivation, either implicitly or explicitly in the prior art, for reasonably combining Applicants' admitted prior art and Teshima or Irwin in order to arrive at Applicants' invention.

When applying 35 U.S.C. § 103, the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination. To establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to the one of ordinary skill in the art, to modify the references or to combine reference teachings. In addition, there must be a reasonable expectation of success. See MPEP 2142 and 2143. Applicants submit that this "reasonable expectation" cannot be met when the references recognize neither the problem to be solved, nor the purpose for which the elements taken from the references will be used. In particular, Applicants submit that all electrically insulating materials are not resistant to permeation by sulfur. The references do not even address this issue, and therefore cannot teach or suggest a protective layer composed of an electrically-insulating material resistant to permeation by sulfur compounds. Stated otherwise, the cited prior art does not contemplate any of the following points which summarize the invention: the problem of sulfur compounds permeating the electrically-insulating layer of conducting wires, the bobbin, and the outer molding and the formation of sulfur compounds on the surface of the conducting wires, which thereby reduces the adhesive strength of the electrically-insulating layer to the conducting wire and results in wire breakage and short circuiting between the conducting wires.

Given the lack of guidance in the prior art, its non-analogous nature, and the absence of any motivation to combine or any reasonable expectation of success from the combination thereof, Applicants respectfully submit that the presently constituted rejections are inappropriate, and accordingly should be withdrawn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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